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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/555,473

11/02/2005

Mario Rescia

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10/12/2007

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EXAMINER

HUTCHINS, CATHLEEN R

ART UNIT

PAPER NUMBER

4112

MAIL DATE

DELIVERY MODE

10/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/555,473

Applicant(s)

RESCIA, MARIO

Examiner

Cathleen R. Hutchins

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4112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/27/2006</u> | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 1, 4, and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Tapp, et al., US5332038, granted 7/26/1994.

a. In regards to claim 1, Tapp, et al. teaches

A device for gravel packing (title), the device having a generally vertical cemented casing (Fig 3A [WEP]) and a stop-sand liner hanger (Fig 3A item [34]), said stop-sand liner hanger comprising a gravel ports pipe (Fig 1 cross-over tool [XOV] has ports and is a pipe), and a gravel setting tool guide pipe (Fig 3A [30]) around which is fixed at the top end an upper external stop-ring (Fig 3A threads [60] form a ring at the top of the pipe) below which are freely adjusted at least one rubber packer (Fig 3A [32]) between an upper rubber packer protection ring

(Fig 7A [156]) and a push-up ring (Fig 7A [150a]), said rubber packer being compressible by the push-up ring (col 8 line 58-66) when the latter comes to rest on the three bearing (for bearings, see argument below) which produces a relative upwards movement of the push-up ring over the gravel setting tool guide pipe (col 11 line 37-42) against the downwards action of the weight of the stop-sand liner hanger and underlying screens/liners (abstract: gravel screen), said compression increasing the external diameter of the rubber packer sealing off the annulus between the cemented casing and the stop-sand liner hanger (col 11 line 37-42).

Tapp, et al. does not teach casing comprising three bearing elliptical balls located on the inner surface of the casing at the same level adjacent its bottom. Tapp, et al., however, teaches a packer in Fig 3A [PKR], which is an industry recognized equivalent to the fixed elliptical ball bearings. The packer in Fig 3A contains 3 elements, which contact the inner wall of casing. In light of the Supreme Court decision in KSR International co. v. Teleflex Inc., 550 U.S.-, 82 USPQ2d 1385 (2007), it would have been obvious at the time of the instant invention to a person having ordinary skill in the art of designing liner hanger assemblies to modify Tapp, et al. to replace the slips with the elliptical ball bearings, since they are an art-recognized equivalent methods of producing upwards force against a downwardly run tool in a wellbore.

b. In regards to claim 4, Tapp, et al. teaches the independent elements of claim 1. Tapp, et al. also teaches the three elliptical balls (found to be equivalent

to Fig 3A packers [PKR] in claim 1 rejection) are located at angles of 120.degrees (Fig 3A, wherein [PKR] is configured to be 120 degrees apart from each other).

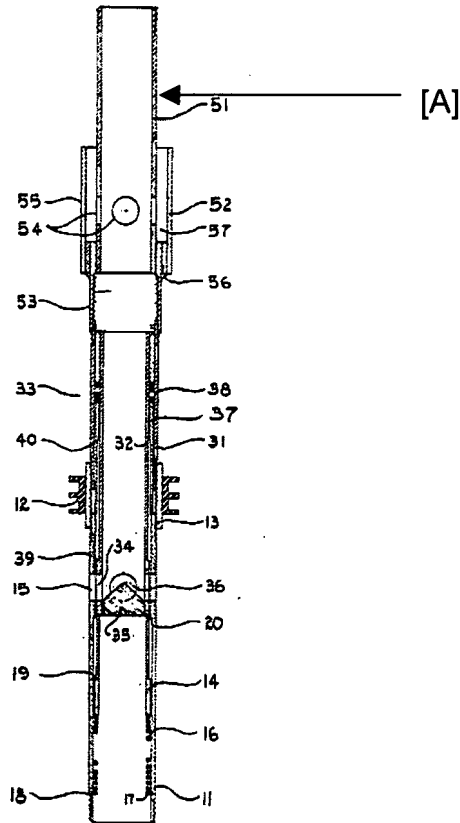
c. In regards to claim 5, Tapp, et al. teaches all of the independent elements of claim 1, excepting the element of elliptical ball bearings. Tapp, et al. also teaches the further limiting elements of an upper rubber packer (Fig 7A [32]) and a lower rubber packer (col 10 line 52-55. wherein a 3 piece packer is specified. The lower rubber packer is the lower element) are freely adjusted around the said gravel setting tool guide pipe, the said upper and lower rubber packers being adjacent to an intermediate rubber packer protection ring (col 10 line 52-55, wherein the intermediate rubber packer protection ring is the center element of the packer) on one side and to respectively an upper rubber packer protection ring (Fig 7A [150a]) and a push-up ring (Fig 7A [156]) on the other side.

4. Claims 2 and 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Tapp, et al. as applied to claim 1 above, and further in view of Price, US4745975, granted 5/24/1988.

a. In regards to claim 2, Tapp, et al. teaches all of the independent elements in claim 1. Tapp, et al. does not teach all of the further limiting elements of claim 2. Price teaches the gravel ports pipe (Fig 2, apertures [15]), which has three gravel ports, contains inside its inner diameter a gravel ports piston (Fig 3 [14]) which is placed above a spring case (Fig 3 [17], and [18] hold a spring), said piston resting on a spring (Fig 3 spring [16]) receives in its inside profile a gravel pack

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setting tool (Fig 7, where in the upper part is a setting tool. See Fig below, [A]), said spring being compressed under the weight of the gravel pack setting tool when the latter is positioned inside the SSLH (Fig 6, showing spring [16] compressed) causing the downwards movement of the gravel ports piston (Fig 6, showing [14] moved down) and causes the opening of the gravel ports by the juxtaposition of gravel ports of the pipe and ports of said piston (Fig 6, showing [15] aligned with [34]). In light of the Supreme Court decision in KSR International co. v. Teleflex Inc., 550 U.S.-, 82 USPQ2d 1385 (2007), it would have been obvious at the time of the instant invention to a person having ordinary skill in the art of designing liner hanger assemblies to modify Tapp, et al. in view of Price, to replace the sliding sleeve valve and resilient collet fingers (of Fig 3A in Tapp, et al.) with an art recognized equivalent of a sleeve and spring (of Fig 6 in Price), to obtain the predictable results of having a piston which may align with port holes in a ports pipe, after downward pressure from a setting tool is applied to compress the spring the piston is resting on.



b. In regards to claim 3, Tapp, et al. also teaches three guide plates (Fig 20 [425], wherein 4 are shown) are fixed at angles of 120.degree. Inside the gravel setting tool guide pipe, said guide plates axially adjust the gravel setting tool gravel ports with the piston gravel ports (col 15 line 41-44). Tapp, et al. does not teach the use of 3 guide plates. However, the use of 3 guide plates versus 4 guide plates would have been an obvious choice to a person having ordinary skill in the art of designing liner hanger assemblies, because 4 guide plates is an art recognized equivalent to 3 guide plates.

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Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Parrish, US2059901, granted 11/3/1936
- b. Lubitz, US4842057, granted 6/27/1989
- c. Coon, US6752216, granted 6/22/2004, teaching the use of an elliptical ball bearing to hang a liner hanger.
- d. Pietrobelli, et al., PG Pub 2003/0173074, published 9/18/2003, teaches all of the elements in claim 5, excepting some of the independent elements in claim 1.
- e. Ross, US 5443117, granted 8/22/1995

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathleen R. Hutchins whose telephone number is (571)270-3651. The examiner can normally be reached on Mon thru Thurs 7:30-5, alternate Fri 7:30-4 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David V. Bruce can be reached on 571-272-2487. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CRH/
crh


DAVID BRUCE
SUPERVISORY PATENT EXAMINER